SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Local Commercial & Community Health

MEMORANDUM

DATE: December 1, 1998
TO: SSC Managers
FROM: Jack Broadbent /s/ Jack
SUBJECT: Permit Requirements for Emergency ICEs

As a result of several meetings with engine manufacturers, BACT staff and Certification/Registration staff, the following recommendations have been developed to assist in permitting and certification of emergency ICEs. It is important to have consistency between teams, so I would like your input on these standards. Please provide comments to Jill by December 9. We will then finalize these standards and provide guidance to permitting staff.

The following standards for permitting emergency ICEs will be used:

- ✓ The emission standards will apply to all emergency use ICE, irrespective of fuel type.
- ✓ These emission standards will be used for all emergency use situation ICE irrespective of duty, i.e., electrical generation, fire pumping, water pumping, sanitation, etc.
- ✓ The equipment shall have a permit condition not to operate more than 199 hours in any calendar year.
- ✓ A condition will be required for installation of a non-resettable engine operating elapse timer to indicate the amount of hours the engine has been in operation.
- ✓ All diesel fuel will be limited by permit condition to contain no more than 0.05% by weight sulfur content.
- ✓ The equipment shall comply with BACT requirements based on the table below or if the equipment possesses an USEPA Nonroad Compression-Ignition Engine certification, the certification will be accepted in lieu of the BACT requirements:

Engine Size (BHP)	BACT Requirements*
50 to < 175	NOx ≤ 6.9 gr/bhp-hr
175 to < 750	ROG ≤ 1.0 gr/bhp-hr NOx ≤ 6.9 gr/bhp-hr CO ≤ 8.5 gr/bhp-hr PM10 ≤ 0.38 gr/bhp-hr
≥ 750	NOx ≤ 7 gr/bhp-hr, or Turbocharging, aftercooling and 4 degree retarding of The fuel injection timing.

*All values will have a margin of error value of 15%

The rationale for choosing the above emission limits are primarily based on USEPA's Non-road Compression-Ignition Engine requirements contained in the Code of Federal Regulation. These USEPA nonroad emission limits are only for compression ignition engines. Currently there are emission limits for ROG, NOx, CO, and PM for nonroad engines rated from 175 to < 750 bhp, but only emission limits for NOx for units rated < 175 bhp, and emission limits for units greater than or equal to 750 bhp are not required until Jan.1, 2000. The 15% margin of error reflects uncertainty in emission testing, and is intended to apply only to this type of equipment.

Note that there are no emission standards for spark ignited engines. That is, currently gasoline-fueled or gaseous-fueled engines do not have USEPA nonroad emission limits.

See attached for required permit conditions. Thank you for your assistance.

JPB:JW:AYL

Attachment

cc: Carol Coy

Suggested Required Permit Conditions on Emergency ICEs

COMPRESSION IGNITION (DIESEL-FUELED) ENGINES

1. **A NON-RESETTABLE TIME METER SHALL BE MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.**

2. **THIS ENGINE SHALL NOT OPERATE MORE THAN 199 HOURS IN ANY CALENDAR YEAR.**

3. **AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF TWO YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.**

4. **SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 0.05% BY WEIGHT.**

SPARK IGNITION ENGINES

1. **A NON-RESETTABLE TIME METER SHALL BE MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.**

2. **THIS ENGINE SHALL NOT OPERATE MORE THAN 199 HOURS IN ANY CALENDAR YEAR.**

3. **AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED TIME, IN HOURS, AND THE REASON FOR OPERATION SHALL BE KEPT AND MAINTAINED ON FILE FOR A MINIMUM OF TWO YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.**

4. **THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR-TO-FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES.**

5. **ONLY UTILITY GRADE NATURAL GAS COMMERCIAL GRADE LIQUID PETROLEUM GAS (LPG) MAY BE SUPPLIED TO THIS ENGINE.**

Fuel Type Only if applicable